APPENDIX 9 – WILDLIFE TABLE 1: RANGE OF KEY VEGETATION ATTRIBUTES

Range of key vegetation attributes measured at sites occupied by goshawks, flammulated owls, and pileated woodpeckers in the NRMEP (summarized in Samson 2006a). The last row of the table includes the minimum range of vegetation attributes for old growth as defined by Green et al. (1992, 2005). Vegetation attributes include tree dominance type, percent canopy cover (CC), basal area in sq ft/ac (BA), basal area weighted diameter in inches (in) (BAWTD), number of canopy layers (layers), number of snags per acre (snags), and aspect. (note dbh = diameter at breast height, TPA = trees per acre).

Species	Tree Dominance Type*	CC	BA	BAWTD	Layers	Snags	Aspect
Northern Goshawk Nesting	ABGR, ABGR-1MIX, ABLA, ABLA-1MIX, IMXS, LAOC, LAOC-1MIX, PIMO, PIMO3-1MIX, PIPO, PIPO-1MIX, PSME, PSME-1MIX, TGCH, TSHE, TSHE-1MIX, POTR5, POTR5-1MIX, BEPA, BEPA-1MIX	68 to 92 (34 to 92 Region-wide)	113-249	10-18	1,2	None specified	None specified for the NRMEP due to variation in aspects used, however, 85 of 143 nest sites occurred on wetter north aspects, north aspects preferred (P=0.01) in Clough (2000).
Flammulated Owl Nesting/Foraging	PIPO, PIPO-1MIX; PSME, PSME-1MIX	35 to 85 NRMEP, > 20 LNF	None specified	>= 14	1,2	0.4 > 10in dbh	Dry aspects: S, SE, SW, W
Pileated Woodpecker Nesting	ABGR, ABGR- 1MIX, IMXS, LAOC, LAOC-1MIX, PSME, PSME-1MIX, PIPO, PIPO-1MIX. TSHE, TSHE-1MIX, THPL, THPL-1MIX, POPUL, POPUL-1MIX, BEPA, BEPA-1MIX, TGCH, POTR5, POTR-1MIX, PIEN, PIEN-1MIX	> 10	None specified	None specified, need >0 TPA >= 15in dbh	1,2	None specified	None specified
Winter Foraging	Same as above	> 10	None specified	None specified, need > 0 TPA >= 10in dbh; >= 0 logs > 12in diameter.	1,2	None specified	None specified
Green et al. (2005) Old growth	Includes all dominance types above.	None specified (will see > 20 for stands > 60 BA and > 40 for stands > 80 BA	Range > 60 for drier habitat types to >80 for wetter habitat types	None specified, need from 8 to 10 TPA > 17 to 21in dbh depending on habitat type group	Varied	> 6 to > 9”	Varies, depending on habitat type (Groups 1, 2 on drier south slopes, 3 and above on wetter)

APPENDIX 9 – WILDLIFE TABLE 2: STAND ATTRIBUTES MEASURED AT OBSERVATION POINTS (NORTHERN GOSHAWK)

Northern Goshawk Analysis. Row A of table displays the actual range of vegetation attributes measured at observation points for northern goshawk nesting in the NRMEP (Samson 2006a). Rows B, C, and D display the total number of untreated, treated (pre- and post-), and burned (pre- and post-) stands sampled for this monitoring project that fall within the ranges reported in row A. Vegetation attributes include tree dominance type, percent canopy cover (CC), basal area in sq ft/ac (BA), basal area weighted diameter in inches (BAWTD), number of canopy layers (layers), number of snags per acre (snags), and aspect. The last column displays the number and percent of untreated, treated, and burned stands that had all the vegetation attributes (columns 1 through 5) that comprise goshawk habitat in the NRMEP.

		1	2	3	4	5	6	7	
		Tree Dominance Type	**CC**	**BA**	**BAWTD**	**Layers**	**Snags**	**Aspect**	**# of stands meeting all vegetation attributes**
A	**Northern Goshawk (Samson 2006a)** Nesting	ABGR, ABGR-1MIX, ABLA, ABLA-1MIX, IMXS, LAOC, LAOC-1MIX, PIMO, PIMO3-1MIX, PIPO, PIPO-1MIX, PSME, PSME-1MIX, TGCH, TSHE, TSHE-1MIX, POTR5, POTR5-1MIX, BEPA, BEPA-1MIX	> 68	113-249	> 7”	1,2,C	None specified	None specified for the NRMEP due to variation in aspects used, however, 85 of 143 nest sites occurred on wetter north aspects, north aspects preferred (P=0.01) in Clough (2000).	
	Foraging	Same as above	> 40	None specified	None specified	None specified	None specified	None specified	
B	**Untreated** (n=9)	9 (100%)	1 (11%) nesting 6 (67%) foraging	4 (44%)	7 (78%)	9 (100%)	n/a	5 (56%) on north aspects	0 nesting 6 (67%) foraging
C	**Treated** Pre- (n=16)	16 (100%	3 (19%) nesting 13 (81%) foraging	11 (69%)	10 (63%)	16 (100%)		3 (19%) occurred on north aspects	1 nesting 13 (81%) foraging
	Post-(n=16)	16 (100%	1 (6%-) nesting 1 (6%-) foraging	5 (31%-)	5 (50%+)	16 (100%)			0 nesting 1 (6%) foraging
D	**Burn** Pre- (n=6)	6 (100%)	0 nesting 6 (100%) foraging	4 (67%)	5 (83%)	6 (100%)		2 (33%) occurred on north aspects	0 nesting 6 (100%) foraging
	Post- (n=6)	3 (50%; 2PSME, 1ABLA stand replaced)	0 nesting 0- foraging	0-	0-	3 (50%)		Of 3 stand replacement fires, 2 occurred on south aspect PSME , 1 on north aspect ABLA.	0 nesting 0 foraging

APPENDIX 9 – WILDLIFE TABLE 3: STAND ATTRIBUTES MEASURED AT OBSERVATION POINTS (FLAMMULATED OWL)

Flammulated Owl Analysis. Row A of table displays the actual range of vegetation attributes measured at observation points for flammulated owl in the NRMEP (McCallum 1994, Wright 1996, and Groves et al. 1997in Samson 2006). Rows B, C, and D display the total number of untreated, treated (pre- and post-), and burned (pre- and post-) stands sampled for this monitoring project that fall within the ranges reported in row A. Vegetation attributes include tree dominance type, percent canopy cover (CC), basal area in sq ft/ac (BA), basal area weighted diameter in inches (BAWTD), number of canopy layers (layers), number of snags per acre (snags), and aspect. The last column displays the number and percent of untreated, treated, and burned stands that had all the vegetation attributes (columns 1 through 7) that comprise owl habitat in the NRMEP.

		1	2	3	4	5	6	1 through 6
		Tree Dominance Type	**CC**	**BAWTD**	**Layers**	**Snags**	**Aspect**	
A	**Flammulated Owl (Samson 2006a)** Nesting and Foraging	PIPO, PIPO-1MIX; PSME, PSME-1MIX	35 to 85 NRMEP > 20 LNF, unpubl. data	>= 14"	1,2	0.4 > 10" dbh	Dry aspects: S, SE, SW, W	
B	**Untreated** (n=9)	9 (100%)	7 (78%) > = 35 9 (100%) > 20	6 (67%)	9 (100%)	9 (100%)	4 (44%)	4 (44%)
C	**Treated** Pre- (n=16)	16 (100%)	15 (94%) >= 35 15 (94%) > 20	10 (63%)	16 (100%)	16 (100%)	13 (81%)	10 (69%) 10 (69%)
	Post-(n=16)	16 (100%	1 (8%) >= 35 13 (81%) > 20	16 (100%)	16 (100%)	16 (100%)		0 (0) 7 (44%)
D	**Burn** Pre- (n=6)	6 (100%)	6 (100%) >= 35 6 (100%) > 20	1 (17%)	6 (100%)	6 (100%)	4 (67%) occurred on north aspects	1 (17%)
	Post- (n=6)	3 (50%; 2PSME, 1ABLA stand replaced)	1 (17%) >= 35 2 (34%) > 20	1 (17%)	3 (50%)	6 (100%)	Of 3 stand replacement fires, 2 occurred on south aspect PSME , 1 on north aspect ABLA.	1 (17%)

APPENDIX 9 – WILDLIFE TABLE 4: STAND ATTRIBUTES MEASURED AT OBSERVATION POINTS (PILEATED WOODPECKER)

Pilieated Woodpecker Analysis. Row A of table displays the actual range of vegetation attributes measured at observation points for pileated woodpecker nesting and foraging habitat in the NRMEP (Hutto 1995; McClelland and McClelland 1999, Bonar 2001, and Aubrey and Raley 2002 in Samson 2006a). Sections B, C, and D display the total number of untreated, treated (pre- and post-), and burned (pre- and post-) stands sampled for this monitoring project that fall within the ranges reported in row A. Vegetation attributes include tree dominance type, percent canopy cover (CC), > 0 trees per acre > 15in diameter for nesting and > 10in for foraging, and > 0 logs > 12in diameter.

		Tree Dominance Type	**CC**	**> 0 trees per acre**	**> 0 Logs**
A	**Pileated Woodpecker** Nesting	ABGR, ABGR- 1MIX, IMXS, LAOC, LAOC-1MIX, PSME, PSME-1MIX, PIPO, PIPO-1MIX. TSHE, TSHE-1MIX, THPL, THPL-1MIX, POPUL, POPUL-1MIX, BEPA, BEPA-1MIX, TGCH, POTR5, POTR-1MIX, PIEN, PIEN-1MIX	> 10	>= 15in	>=12in
	Winter Foraging	Same as above	> 10	>= 10in	>= 12in
B	**Untreated** (n=9)	9 (100%)	9 (100%	9 (100%)	4 (44%)
C	**Treated** Pre- (n=16)	16 (100%	16 (100%)	16 (100%	Not available
	Post-(n=16)	16 (100%	16 (100%)	16 (100%)	15 (94%)
D	**Burn** Pre- (n=6)	6 (100%)	6 (100%	6 (100%)	Not available
	Post- (n=6)	3 (50%; 2PSME, 1ABLA stand replaced)	4 (67%)	5 (83%)	6 (100%)